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| APPLICATION NO.                              | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/798,885                                   | 03/12/2004  | Yoshinobu Suehiro    | PTGF-04010 HIR.094  | 4900             |
| 21254  | 7590        | 12/02/2005           | EXAMINER            |                  |
| MCGINN INTELLECTUAL PROPERTY LAW GROUP, PLLC |             |                      | LOVELL, LEAH S      |                  |
| 8321 OLD COURTHOUSE ROAD                     |             |                      | ART UNIT            |                  |
| SUITE 200                                    |             |                      | PAPER NUMBER        |                  |
| VIENNA, VA 22182-3817                        |             |                      | 2875                |                  |

DATE MAILED: 12/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/798,885

Applicant(s)

SUEHIRO ET AL.

Examiner

Leah S. Lovell

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>18 June 2004</u>  | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Objections*

1. Claim 2 is objected to because of the following informalities: "the part" on line 2 lacks antecedent basis. Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-5 and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Benitez et al. (US 6,896,381). Regarding claim 1, Benitez teaches a LED package comprising a light emitting element [34], a first optical section [31] disposed around the light emitting element, and a second optical section [20] disposed around the first optical section positioned to have a gap between the first and second optical sections. Furthermore, Benitez teaches a reflective surface [24] on the back side of the second optical section wherein the reflective surface reflects the horizontal light of the light emitting element in a direction parallel to that of the central axis [figure 4].

In regard to claim 2, Benitez teaches part of the light emitted from the light-emitting element is discharged in a range of 45° to 90° from the central axis.

In regard to claim 3, Benitez teaches a recess in the first optical section for the light-emitting element [figure 3].

Regarding claim 4, Benitez teaches a phosphor layer on the surface of the light emitting element which is in contact with the surface of the recess of the first optical section; therefore, there is a phosphor layer on the surface of the recess [column 10, lines 3-6].

In regard to claim 5, Benitez teaches a light-emitting member integrally formed within the first optical section [figure 3].

Regarding claim 9, Benitez teaches a plurality of reflection surfaces [figure 12] wherein each change of slope represents a different reflective surface.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Benitez et al. (US 6,896,381) in view of Koike et al. (US 6,345,903). Benitez discloses the LED package as described above. Benitez further teaches a silicon substrate in which the LED is attached. However, Benitez lacks a teaching of lead frames. Koike teaches lead frames [figure 2] on a similar device. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide Benitez with lead frames as taught by Koike to allow a plurality of LED packages to be electrically connected and linked.

5. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Benitez et al. (US 6,896,381) in view of Priesemeth (US 5,452,190). Benitez teaches a gap between the first and second optical sections. Benitez lacks the disclosure of first and second optical sections partially in direct contact and further being connected with an optical adhesive. Priesemuth teaches a first [12] and second [14] optical section in contact [figure 1, abstract]. Priesemuth teaches the two optical sections in contact utilizing an adhesive [column 2, lines 47-48], which is inherently optical given the application. It would have been obvious to one of ordinary skill in the art at the time of the invention for the first and second optical sections of Benitez to be in contact with one another as well as keep them together utilizing an optical adhesive as taught by Priesemuth. With the first and second optical sections in contact there will be a minimal loss of light. The optical adhesive will ensure the two pieces continue to be in contact.

6. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Benitez et al. (US 6,896,381) as applied to claims 1 and 9 above and further in view of Gasquet et al. (US 6,755,556). Benitez teaches one embodiment of a plurality of reflective surfaces; however, teachings of stepwise and intermittently formed reflective surfaces are lacking in the disclosure of Benitez. Gasquet discloses an indicator light wherein there is a light emitting element [14] surrounded by a first optical section [20] further encapsulated by a second optical section [22]. The rear of the second optical element [20] has a stepwise cross-section [figure 6]. Intermittent by definition means to stop and start at intervals. Therefore, the stepwise reflective surfaces can also be described as intermittent. It would have been obvious to one of

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ordinary skill in the art at the time of the invention to provide the back of the second optical section of Benitez with a stepwise, intermittent cross section to focus and reflect light to perform a specific function or in a particular direction producing a desired effect.


**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leah S. Lovell whose telephone number is (571) 272-2719. The examiner can normally be reached on Monday through Friday 7:45 a.m. until 4:15 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Renee Luebke can be reached on (571) 272-2009. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Leah Lovell  
Examiner  
22 November 2005

  
RENEE LUEBKE  
PRIMARY EXAMINER